TELECART II™

MULTI-MODE TELECONTROLLER

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DESCRIPTION

TELECART II is a multi-mode telecontroller for broadcast station and similar application. Telecart II has two basic modes of operation: "CART", for use with an NAB-type cartridge machine, and "CPC", for use without such a machine, e.g., "listen lines", etc.

When in the "CART" mode, Telecart II will automatically answer a phone line, start the cart machine, and play a recorded message to the caller. Failsafe circuitry prevents the line from being answered unless the cart is cued and ready to play. At the conclusion of the message, Telecart II releases the line and is ready to accept the next call.

When in the "CPC" mode, Telecart II will automatically answer a phone line and couple the line to any audio source (or input) so that audio can either be fed to the caller, or caller audio can be fed to external equipment, e.g., a console or tape recorder input. In this mode, Telecart II keeps the phone line in a "seized" condition until the caller hangs up. Telecart then senses the CPC ("Calling Party Control") signal supplied by the local Telco C.O. and releases the line. Note: For areas that do not have CPC, see below.

Telecart II has a digital call counter that registers the number of calls answered in either mode. An internal switch allows the user to select one of two ranges for the counter, to indicate up to 999 (LO) or 9,999 (HI) calls.

INSTALLATION (All connections are made via the front-panel barrier strip.)

CART MODE: (FOR USE WITH A CART MACHINE)

Set the MODE switch to the CART position. Three circuits must be connected between the Telecart II and the cart machine: AUDIO, START, and PLAY. Connect the audio output of the cart machine to the AUDIO INPUT terminals of the Telecart II. This input is transformer isolated (600 ohms) and balanced; polarity is unimportant. Connect the 'remote start' circuit of the cart machine to the CART START terminals of the Telecart II. These terminals provide a 500ms isolated contact closure to start the machine. Connect the 'remote play lamp' circuit of the cart machine to the PLAY terminals of the Telecart II. Observe polarity; the cart machine must provide 5 to 24 vdc to these terminals when the cart is playing, and 0 volts when the cart machine is stopped (ready to play).

CPC MODE: (FOR USE WITHOUT A CART MACHINE, E.G., "LISTEN LINES" ETC.)

Set the MODE switch to the CPC position. Connect the audio feed (or input) to the AUDIO INPUT terminals on the Telecart II. This input is transformer isolated (600 ohms) and balanced; polarity is unimportant. Install a jumper between the PLAY (-) and TIP (-) terminals.

CONNECTION TO PHONE LINE

Connect the Telecart II to a standard two-wire phone line via the RING and TIP terminals. The cord supplied may be used if the phone line uses a modular jack. Connect the red lead to the RING terminal and the green to the TIP terminal. The yellow and black leads should be cut off and taped so they do not contact other wiring. IMPORTANT: When Telecart II is used in the CPC mode, phone line polarity is critical. Check the line polarity with a DC voltmeter; it must correspond to the + and - markings on the front panel. If the phone system requires "line supervision" with A and A1 leads, connect these to the appropriate terminals on the Telecart.

OPERATION

CART MODE: Operation is automatic. When a call is received, the cart machine will start playing the message to the caller. The line will be released when the cart re-cues and stops. If a caller hangs up during the message, the line will be held "busy" until the cart re-cues. NOTE: Telecart II will not answer the line until the cart machine starts.

CPC MODE: Operation is automatic. When the line rings, Telecart II will seize the line and feed audio that is applied to the AUDIO INPUT terminals. The line will remain seized until the caller hangs up. NOTE: When AC is applied, Telecart II 'powers up' ON LINE (line seized). Momentarily switch the CART/CPC switch to CART, then back to CPC to release the line.

In either mode, the ON LINE indicator LED will illuminate whenever Telecart II has seized the line. The digital call counter registers the number of calls answered.

USER OPTIONS

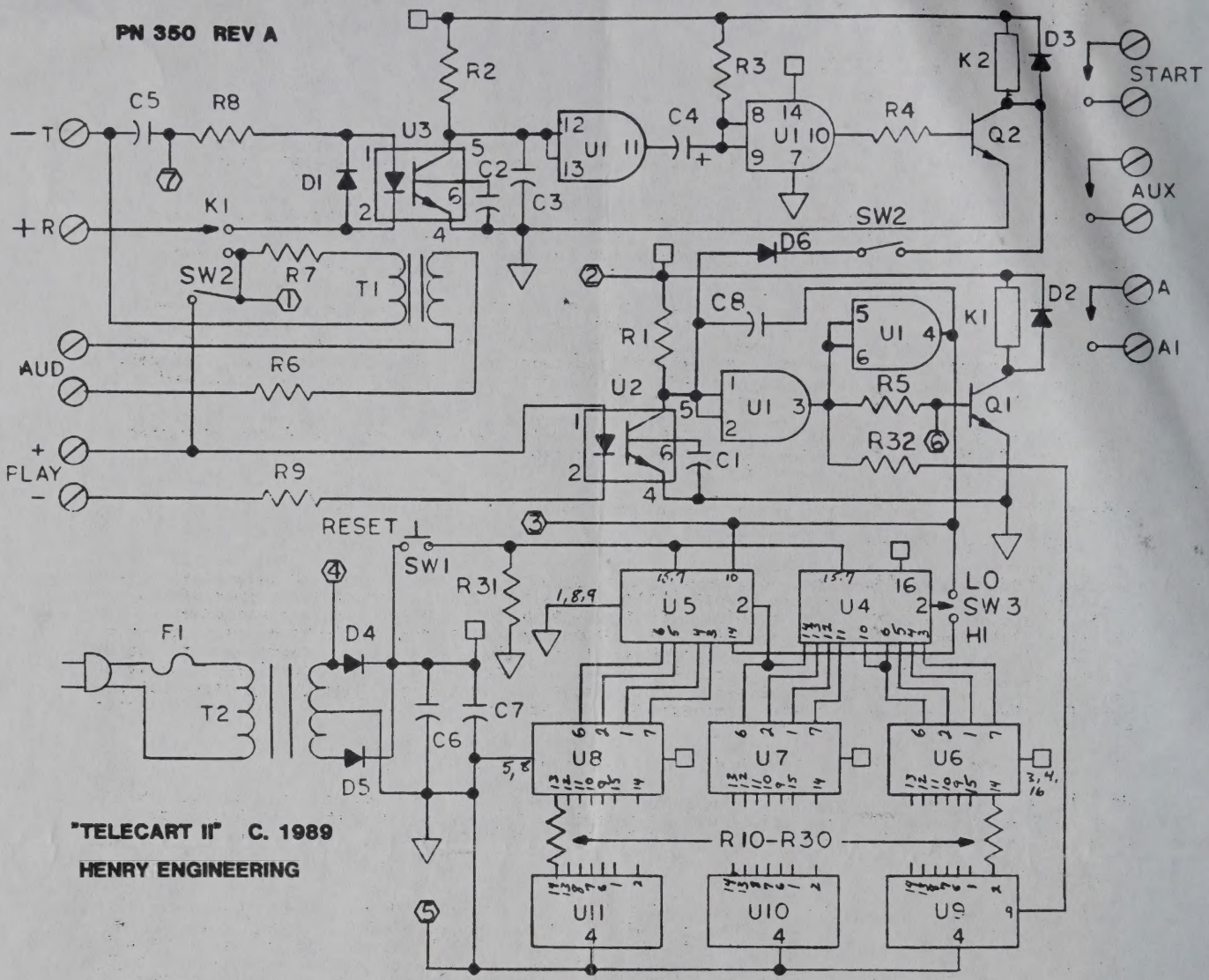
The digital call counter has two ranges: LO and HI. In the LO range, the counter registers to 999 calls. In the HI range, the counter registers to 9,999 calls, however, the least significant digit is not displayed. For example, in the HI range, a display of "123" actually indicates 1,23X calls received, with the last digit ("X") unknown. The counter range is selected with an internal switch (SW3) as shown on the component layout (see over). The digital counter can be reset to 000 with the front panel RESET button.

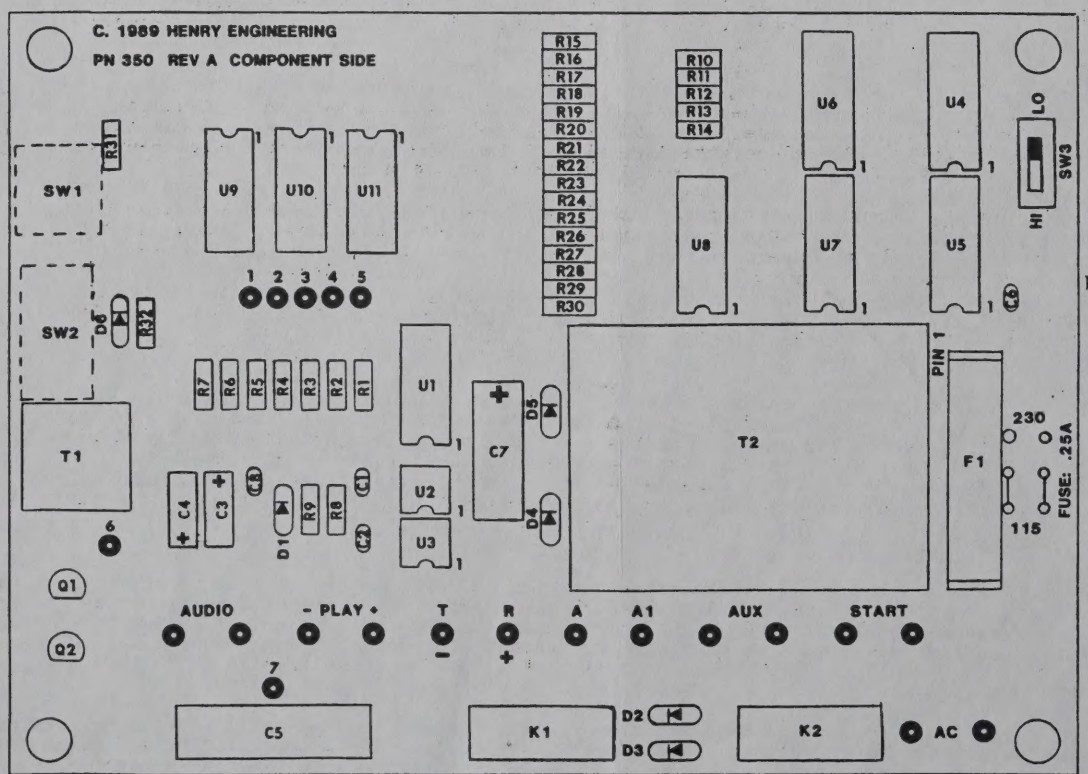
FOR AREAS THAT DO NOT HAVE CPC

The CPC signal is a momentary "talk voltage" drop-out (or polarity reversal) that occurs when the calling party hangs up. If your local Telco does not provide CPC there will be either a dial-tone or busy-signal on the line when the caller hangs up. In this case, the optional Dial-tone/Busy-signal detector must be used with Telecart II for non-cart operation.

NOTES

Adjust audio source level to provide adequate level to the caller. 0 dBm should suffice in most cases. DO NOT OVERDRIVE THE PHONE LINE! It is best to filter the audio below 100 Hz for best results. The AUX START terminals on the Telecart II close momentarity with the CART START terminals. They can be used to set the "record" function if the Telecart II is used to record caller audio on a cart machine, e.g., to record news actualities from field reporters, etc.





PARTS LIST

R1	100K
R2	47K
R3	220K
R4	10K
R5	10K
R6	100ohm
R7	100ohm
R8	3.9K
R9	2.4K
R10-30	2.4K
R31	10K
R32	3.9K
C1	.001uf
C2	.001uf
C3	3.3 uf
C4	3.3 uf
C5	.47 uf
C6	.1 uf
C7	470 uf
C8	.1 uf
D1-D6	1N4004
Q1,Q2	2N4401
U1	CD4011
U2,U3	4N25
U4,U5	CD4518
U6-U8	CD4511
U9-U11	4740
F1	.25A
K1,K2	RZ-12
T1	500:500